March 18, 1947. T. W. MULLEN 2,417,774

BOTTLE CARRIER

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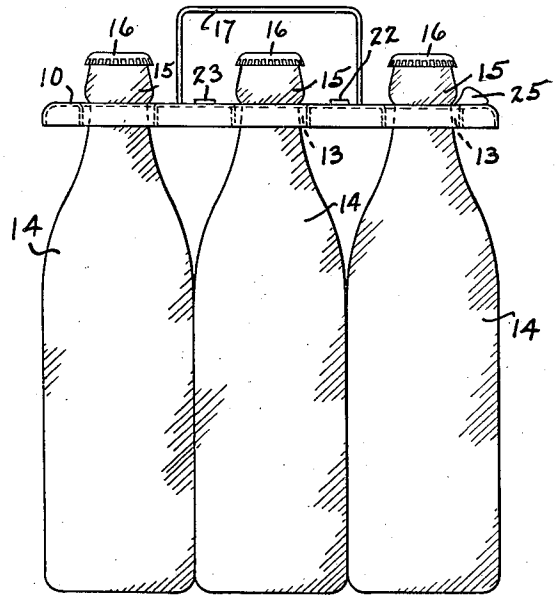


Fig. 1.

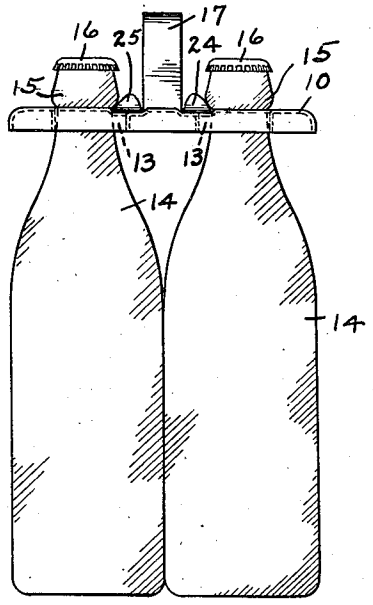


Fig. 2.

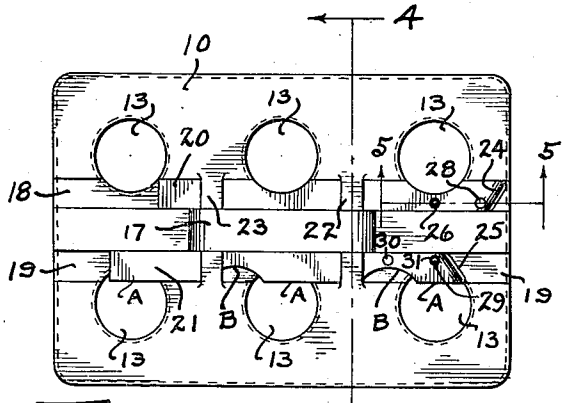


Fig. 3.

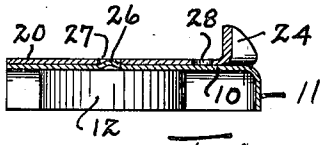


Fig. 5.

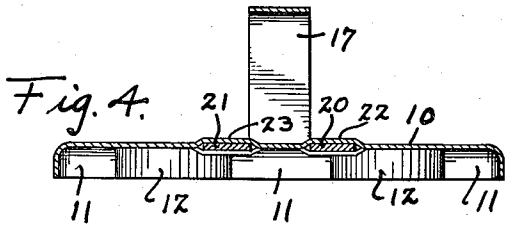


Fig. 4.

INVENTOR,
THOMAS W. MULLEN,
BY Herbert A. Minturn.
ATTORNEY.

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BOTTLE CARRIER

Thomas W. Mullen, Evansville, Ind.

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1 Claim. (Cl. 224—45)

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This invention relates to means for carrying a number of bottles and is particularly adapted to carrying filled and empty bottles back and forth between stores and dispensing establishments, as a matter of convenience in not only carrying the bottles but also as a matter of preventing breakage and the avoidance of the use of paper or fiber board containers.

A primary advantage of the invention is that it may be incorporated in a substantially small structure resistant to normal wear and tear to last over an exceedingly long period of time, and at the same time may be exceedingly simple not only in construction and manufacture, but also in manipulation by the user.

A further important advantage of the invention is that it may be exceedingly light in weight even though made of metal; and will be neat and unobtrusive and yet certain of carrying the bottles without accidental release thereof whether the bottles be resting upon a solid foundation or suspended in the air.

These and many other objects and advantages of the invention will become apparent to those versed in the art in the following description of one particular form of the invention as illustrated in the accompanying drawing, in which

Fig. 1 is a view in side elevation of a structure embodying the invention and with bottles engaged thereby;

Fig. 2, a view in end elevation;

Fig. 3, a top plan view;

Fig. 4, a view in transverse vertical section on the line 4—4, and

Fig. 5, a detail in vertical longitudinal section on the line 5—5 in Fig. 3.

Like characters of reference indicate like parts throughout the several views in the drawing.

A base or plate member 10 may be made out of any selected material including one of the plastics; fiber board; ply wood; or metal without any limitation thereby to the scope of the invention. In the present form, the plate 10 is shown as being made out of metal, and the thickness of this metal may be quite thin where the edges of the plate are reinforced by a turn-downed flange 11 extending therearound and further by annular flanges 12 extending integrally from the plate 10 from the margins of each of the bottle neck receiving holes 13, herein shown as six in number, three in alignment on each side of the longitudinal center line of the plate 10.

The diameters of these holes 13 are made to be such that the mouth ends of the bottles 14 may be relatively inserted therethrough even

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when capped, and to carry the shoulder 15 appearing on each bottle 14 on through the hole. That is, the customarily formed bottle 14 carries an annular shoulder 15 spaced downwardly from the crown cap 16, and advantage is taken of this shoulder 15 to afford a lifting of the bottle thereby.

Preferably some sort of a handle 17 is attached to the plate 10, herein shown as simply a U-shaped member having its lower ends secured to the plate 10 in any suitable manner, such as by welding thereto. Where the handle is to be reduced in height from that shown in the drawing, parts of the plate 10 will be struck upwardly therefrom in a manner well known to those versed in the sheet metal art, such forming of the handle not forming a part of the invention per se.

On each side of the handle 17, the plate 10 is preferably provided with a recess or groove 18 on the one side and 19 on the other side, sufficiently wide and deep as to receive slidingly thereover the engaging bars 20 and 21, to have the upper faces of these bars substantially in the plane of the top side of the plate 10. The bars 20 and 21 are further given a sufficient transverse width as to extend normally by outer edge portions over the respective holes 13.

For example, the bar 21 has an outer marginal edge A which, Fig. 3, extends on a common chordal line across the holes 13. The effective opening then of the holes 13 between this edge A and the opposite edge of the holes 13 in each instance is substantially equal to the diameter of the neck portion of the bottle 14 immediately below the shoulder 15, or at least sufficiently reduced from the full diameter of the hole 13 as to prevent the bottle 15 from passing relatively downwardly through the hole 13 by reason of the engagement of the bar edge A under the shoulder 15 on the one side and the open or outer side of the plate 10 about the hole 13 engaged under the shoulder 15 diametrically across from the edge portion A. The same dimensioning of the bar 20 holds true in respect to the holes 13 on the other side of the handle 17.

The bar 21 may be shifted from this bottle holding position to the right, Fig. 3, to bring into registry with the two right hand holes 13 the notched out marginal edge portions B with the marginal portion of each of those holes 13 whereby the full diameter of the hole 13 in each instance is available for the withdrawing of the bottle from the plate 10. The bar 21 is made of that length in respect to its left hand end, Fig. 3, that when the arcuate portions B are in reg-

istry with the corresponding marginal portions of the holes 13, that end of the bar 21 will be to the right of the extreme left hand hole 13 so as to leave that hole uncovered with its full effective opening therethrough. The bar 20 is shown in this shifted position for bottle release or bottle insertion relatively through the plate 10. In respect to the insertion or release of the bottles 14 normally the plate 10 would be lowered down over the group of six bottles and then the bars 20 and 21 pushed to the left to interengage the plate 10 with the bottles, and when the bottles are to be released, they would be placed upon a table or some suitable base, and each of the bars 20 and 21 then pulled to the right for the release positions as above indicated.

The bars 20 and 21 are retained in position on the plate 10 within their respective slots or grooves 18 and 19 by any suitable means, herein shown as by upwardly struck bands 22 and 23, pushed upwardly and left integral with the plate 10 to permit the bars to slide thereunder freely. Each bar 20 and 21 is preferably provided with an operating means, herein shown as by an upturned end 24 and 25 respectively by which the bars may be readily shifted. The bars are limited in their degree of longitudinal travel by any suitable means, herein shown as by a detent 26 struck upwardly from the plate 10 to be in the path of holes 27 and 28 provided in the bar 20. There is sufficient spring in the bar to permit it to rise over the detent 26, shifting the registry from hole 27 to 28. These holes 27 and 28 are so located in the bar 20 that the hole 27 will be over the detent 26 when the bar 20 is in the released position as shown in Fig. 3, and then when the hole 28 is over the detent 26 the bar 20 is in the bottle lifting position. The bar 21 is likewise provided with a detent 29 struck up in its path to register selectively with the holes 30 and 31 in the same manner to secure the bar releasably in either one of its two positions.

While I have herein shown and described my

invention in the one particular form, it is obvious that structural changes may be employed, particularly in the means for releasably retaining the slide bars within their slots and also within their limited travels from engaging those bottle release positions, all without departing from the spirit of the invention, and I therefore do not desire to be limited to that precise form beyond the limitations as may be imposed by the following claim.

I claim:

In a device for carrying a plurality of bottles by supporting them around their necks under an annular shoulder, a plate having a plurality of aligned holes therethrough; a depressed track forming a groove across the plate and intersected by said holes; a slide bar slidingly carried within said groove, the depth of said groove placing the top side of said bar in the plane of the top side of said plate, and said bar having spaced apart arcuate notches along its edge adjacent said holes arranged to register and non-register selectively with said holes upon reciprocation of the bar; means retaining the bar within said groove; and means yieldingly maintaining said bar in said hole non-registry position; said bar retaining means consisting of at least one strap integral with said plate extending therefrom and up and over said bar.

THOMAS W. MULLEN.

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